

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed March 30, 2005. Through this response, claims 46-48 have been added, claims 20, 23, 26, 29, 32-35, 38, and 44 have been amended, and claims 21, 22, 30, 31, 36, 37, and 45 have been cancelled without prejudice, waiver, or disclaimer. Reconsideration and allowance of the application and pending claims 20, 23-29, 32-35, 38-44, and 46-48 are respectfully requested.

I. Examiner Interview

The Applicant wishes to thank Examiner Puente for providing an opportunity to discuss the merits of various aspects of proposals to independent claims 20, 29, 34, 35, 46, and 47 in a telephone interview between Examiner Puente and Dave Rodack (Reg. No. 47,034) on May 6, 2005. Mr. Rodack submitted that *Alaiwan* (U.S. Pat. No. 5,235,700) does not teach the “committed” features of the proposed claim language. Mr. Rodack explained that the term “committed” or “commit” is generally understood to imply an acknowledgment to a host that a read or write to a storage device has or will be completed. Mr. Rodack pointed out that the column 10 section from *Alaiwan*, cited by Examiner Puente in the last Office Action (mailed 3/30/2005) did not teach anything about an acknowledgment to a host that the SCSI I/O request has been committed. Mr. Rodack submitted that the Applicant’s specification supports this acknowledgment feature on page 9.

Examiner Puente submitted that he read the “committed” language broadly, and suggested that the Applicant add an acknowledgment feature to the claims to provide further clarity to the “committed” language. Examiner Puente also advised that he would have to review *Alaiwan* again to determine whether this feature is disclosed.

Mr. Rodack also submitted that neither *Davis* (U.S. Pat. No. 6,701,449) nor *Alaiwan* disclose, teach, or suggest iSCSI controllers or its related methodology of communication of SCSI requests over a TCP/IP network, which is incorporated into independent claims 46 and 47, among the other claims. Mr. Puente advised that *Davis* teaches SCSI and TCP/IP in column 3, and that he would need to review *Davis* and consult with other Examiners as to the strength of the current rejection as it relates to this feature.

II. Claim Objections

Claims 34 and 45 have been objected to because of the following informalities:

In regard to claim 34 and 45, please change the limitation “the copy” to “a copy”. The limitation “the copy” lacks antecedent basis. Appropriate correction is required.

In response to the objection, Applicant has amended claims 34 and 45 per the Examiner’s request and instruction. In view of the above-noted claim amendments, Applicant respectfully submits that the claims are not objectionable and respectfully requests that the objection be withdrawn.

III. Claim Rejections - 35 U.S.C. § 103(a)

A. Statement of the Rejection

Claims 20-45 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over *Davis et al.* (“*Davis*,” U.S. Pat. No. 6,701,449) in view of *Alaiwan et al.* (“*Alaiwan*,” U.S. Pat. No. 5,235,700). Applicant respectfully traverses this rejection.

B. Discussion of the Rejection

As has been acknowledged by the Court of Appeals for the Federal Circuit, the U.S. Patent and Trademark Office (“USPTO”) has the burden under section 103 to establish a proper case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Accordingly, to make a proper case for obviousness, there must be a prior art teaching or established knowledge that would suggest to a person having ordinary skill in the pertinent art to fill the voids apparent in the applied reference. It is respectfully asserted that no such case has been made in the outstanding Office Action.

Independent Claim 20

With regard to independent claim 20, Applicant claims (with emphasis added):

20. (Currently Amended) A storage system, comprising:
a first iSCSI controller operable to receive a SCSI I/O request over a TCP/IP network; and
a second iSCSI controller coupled to the first iSCSI controller, wherein the first iSCSI controller is configured to copy the SCSI I/O request to memory associated with the second iSCSI controller and acknowledge to a host that the SCSI I/O request has been committed, and wherein responsive to detecting a failure of the first iSCSI controller, if the second iSCSI controller determines that the SCSI I/O request has been committed but not completed, the second iSCSI controller assumes the network address of the first iSCSI controller, retrieves the copy of the SCSI I/O request from the memory, and completes the SCSI I/O request.

Applicant respectfully submits that *Davis* and *Alaiwan* do not disclose, teach, or suggest the emphasized claim features. For instance, and as explained in the Examiner Interview section of this Response, Applicant respectfully submits that neither *Davis* nor *Alaiwan* discloses, teaches, or suggests an “iSCSI controller” or receiving “SCSI I/O requests” over a “TCP/IP network.” Referring to the Examiner’s comment (see Examiner Interview section) regarding *Davis*

teaching SCSI and TCP/IP in col. 3, Applicant respectfully notes that *Davis* discloses SCSI communication between the SCMs 108,110 and the storage pool 112 over a fiber channel network, not over a “TCP/IP network.” For instance, col. 3, lines 11-15 provides as follows:

Although a fiber channel network is depicted as one way of connecting the SCMs 108, 110 to the storage pool 112, the connection may be accomplished using any form of data network protocol such as SCSI, HIPPI, SSA and the like.

Column 3, lines 48-55 discuss TCP/IP, and provide as follows:

The host network 130 is the medium through which the storage system communicates with the clients 104 and 106. The SCMs 108, 110 provide network services such as NFS and HTTP to the clients 104, 106 that reside on the host network 130. The host network 130 runs network protocols through which the various services are offered. These may include TCP/IP, UDP/IP, ARP, SNMP, NFS, CIFS, HTTP, NDMP, and the like.

In other words, the host may communicate with clients through TCP/IP mechanisms, but such communication does not involve SCSI commands, which occur in *Davis* over a fiber channel network coupled to the storage device as described above. Thus, Applicant respectfully submits that *Davis* does not disclose, teach, or suggest the emphasized claim features, and *Alaiwan* does not remedy these deficiencies.

Additionally, with regard to the “committed” and “acknowledge” features recited in independent claim 20, Applicant respectfully submits that *Alaiwan* does not disclose, teach, or suggest the emphasized claim features. The Office Action cites Col. 10 to allegedly support the disclosure of the “committed” claim features. Column 10, lines 10-20 of *Alaiwan* provides This section from *Alaiwan* does not disclose, teach, or suggest the claim language involving the determination of a committed SCSI I/O request, nor the acknowledgment of the committed request. It appears that this cited section describes messaging between processor pairs (see Figure 7, and column 9, lines 52-53). According to the above-cited and reproduced section, a message out will be re-issued by the back-up processor in the case of an aborted comprising

stage. Assuming the “message out” can be equated to a read or write operation corresponding to “completing the SCSI I/O request,” there is nothing in *Alaiwan* that discloses, teaches, or suggests that the processor acknowledges “to a host that the SCSI I/O request has been committed.” Further, lines 20-22 of section 10 in *Alaiwan* bolster the distinctions between the independent claim 20 features and *Alaiwan*. Lines 20-22 provides as follows:

if a message in was performed during the aborted computing stage, the message in will be ignored by the new back up processor and will be resent by the sender.

Assuming for the sake of argument that messaging equates to I/O requests, if indeed *Alaiwan* made a determination that an SCSI I/O request was committed, there would be no need to have the I/O request re-issued, because by committing it is guaranteed that the I/O request will be completed. Also, there is no indication in this section of *Alaiwan* that an acknowledgment to a host occurs. Since *Davis* does not remedy this deficiency, as indicated on page 3 of the Office Action, and since neither reference discloses, teaches, or suggests iSCSI controllers, Applicant submits that independent claim 20 is allowable over the combination of *Davis* and *Alaiwan*, and respectfully requests that the rejection to independent claim 20 be withdrawn.

Because independent claim 20 is allowable over *Davis* and *Alaiwan*, dependent claims 23-28 are allowable as a matter of law for at least the reason that the dependent claims 23-28 contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Independent Claim 29

With regard to independent claim 29, Applicant claims (with emphasis added):

29. A storage method, comprising:
receiving at a first TCP/IP network address a SCSI I/O request;
copying the SCSI I/O request;
storing the copy of the SCSI I/O request at a second TCP/IP network address and acknowledging to a host that the SCSI I/O request has been committed;

detecting whether the SCSI I/O request can be processed at the first TCP/IP network address;

responsive to detecting that the SCSI I/O request cannot be processed at the first TCP/IP network address, *determining whether the SCSI I/O request has been committed but not completed;*

responsive to determining that the SCSI I/O request has been committed but not completed, assuming the first TCP/IP network address from the second TCP/IP network address;

retrieving the copy of the SCSI I/O request; and

writing or reading data corresponding to the copy of the SCSI I/O request to or from a storage system.

Applicant respectfully submits that *Davis* and *Alaiwan* do not disclose, teach, or suggest the emphasized claim features. For instance, Applicant respectfully submits that neither *Davis* nor *Alaiwan* disclose, teach, or suggest an “iSCSI controller” or receiving “SCSI I/O requests” over a “TCP/IP network.” Referring to the Examiner’s comment (see Examiner Interview section) regarding *Davis* teaching SCSI and TCP/IP in col. 3, Applicant respectfully notes that *Davis* discloses SCSI communication between the SCMs 108,110 and the storage pool 112 over a fiber channel network, not over a “TCP/IP network” (see col. 3, lines 11-15, reproduced above). Also, *Davis* discloses that a host may communicate with clients through TCP/IP mechanisms (Column 3, lines 48-55), but such communication does not involve SCSI commands, which occur in *Davis* over a fiber channel network to the storage device as described above. Thus, Applicant respectfully submits that *Davis* does not disclose, teach, or suggest the emphasized claim features.

Additionally, with regard to the “committed” and “acknowledge” features recited in independent claim 29, Applicant respectfully submits that *Alaiwan* does not disclose, teach, or suggest the emphasized claim features. The Office Action cites Column 10, lines 10-20 of *Alaiwan*, but this section from *Alaiwan* does not disclose, teach, or suggest the claim language involving the determination of a committed SCSI I/O request nor of an acknowledgment of the committed request. It appears that this cited section describes messaging between processor

pairs (see Figure 7, and column 9, lines 52-53). According to the above-cited section, a message out will be re-issued by the back-up processor in the case of an aborted comprising stage. Assuming the “message out” can be equated to “writing or reading the SCSI I/O request,” there is nothing in *Alaiwan* that discloses, teaches, or suggests that the processor acknowledges “to a host that the SCSI I/O request has been committed.”

Further, lines 20-22 of section 10 in *Alaiwan* bolster the distinctions between the independent claim 20 features and *Alaiwan*. Assuming for the sake of argument that messaging equates to I/O requests, if indeed *Alaiwan* made a determination that an SCSI I/O request was committed, there would be no need to have the I/O request re-issued because by committing it is guaranteed that the I/O request will be completed. Also, there is no indication in this section of *Alaiwan* that an acknowledgment to a host occurs. Since *Davis* does not remedy this deficiency, as indicated on page 3 of the Office Action, and since neither reference discloses, teaches, or suggests SCSI communication over TCP/IP, Applicant submits that independent claim 29 is allowable over the combination of *Davis* and *Alaiwan*, and respectfully requests that the rejection to independent claim 29 be withdrawn.

Because independent claim 29 is allowable over *Davis* and *Alaiwan*, dependent claims 32-33 are allowable as a matter of law.

Independent Claim 34

With regard to independent claim 34, Applicant claims (with emphasis added):

34. A storage system, comprising:
 - means for detecting whether a SCSI I/O request can be processed at a **first TCP/IP network address**;
 - responsive to detecting that the SCSI I/O request cannot be processed at the first TCP/IP network address, **means for determining whether the SCSI I/O request has been committed**;
 - responsive to determining that the SCSI I/O request has been committed, means for assuming the first TCP/IP network address from a second TCP/IP network address**;
 - means for retrieving a copy of the SCSI I/O request; and**

means for writing or reading data corresponding to the copy of the SCSI I/O request to or from a storage system.

Applicant respectfully submits that *Davis* and *Alaiwan* do not disclose, teach, or suggest the emphasized claim features. For instance, Applicant respectfully submits that neither *Davis* nor *Alaiwan* disclose, teach, or suggest processing “SCSI I/O requests” at “TCP/IP network addresses.” Referring to the Examiner’s comment (see Examiner Interview section) regarding *Davis* teaching SCSI and TCP/IP in col. 3, Applicant respectfully notes that *Davis* discloses SCSI communication between the SCMs 108,110 and the storage pool 112 over a fiber channel network, not over a “TCP/IP network” (see col. 3, lines 11-15, reproduced above). Also, *Davis* discloses that a host may communicate with clients through TCP/IP mechanisms (Column 3, lines 48-55), but such communication does not involve SCSI commands, which occur in *Davis* over a fiber channel network to the storage device as described above. Thus, Applicant respectfully submits that *Davis* does not disclose, teach, or suggest the emphasized claim features.

Additionally, with regard to the “committed” features recited in independent claim 34, Applicant respectfully submits that *Alaiwan* does not disclose, teach, or suggest the emphasized claim features. The Office Action cites Column 10, lines 10-20 of *Alaiwan*, but this section from *Alaiwan* does not disclose, teach, or suggest the claim language involving the determination of a committed SCSI I/O request. It appears that this cited section describes messaging between processor pairs (see Figure 7, and column 9, lines 52-53). According to the above-cited section, a message out will be re-issued by the back-up processor in the case of an aborted comprising stage. Assuming the “message out” can be equated to “writing or reading the SCSI I/O request,” there is nothing in *Alaiwan* that discloses, teaches, or suggests that the

processor acknowledges to a host that the SCSI I/O request has been committed, which would be implicit in a committed SCSI I/O request.

Further, lines 20-22 of section 10 in *Alaiwan* bolster the distinctions between the independent claim 20 features and *Alaiwan*. Assuming for the sake of argument that messaging equates to I/O requests, if indeed *Alaiwan* made a determination that an SCSI I/O request was committed, there would be no need to have the I/O request re-issued because by committing it is guaranteed that the I/O request will be completed. Thus, it appears that *Alaiwan* is not committing an I/O request as that term is understood in the industry. Since *Davis* does not remedy this deficiency, as indicated on page 3 of the Office Action, and since neither reference discloses, teaches, or suggests SCSI communication over TCP/IP, Applicant submits that independent claim 34 is allowable over the combination of *Davis* and *Alaiwan*, and respectfully requests that the rejection to independent claim 34 be withdrawn.

Because independent claim 34 is allowable over *Davis* and *Alaiwan*, dependent claim 48 is allowable as a matter of law.

Independent Claim 35

With regard to independent claim 35, Applicant claims (with emphasis added):

35. A network controller for use on a network, comprising:
a communication port configured to receive status information and a copy of a SCSI I/O request from a second network controller and **a SCSI I/O request over a TCP/IP network;**
a memory configured to store the copy of the SCSI I/O request; and logic configured to detect a failure of the second network controller and **determine whether the SCSI I/O request has been committed by the second network controller, wherein responsive to determining that the SCSI I/O request has been committed, the logic further configured to assume the network address of the second network controller, retrieve the copy of the SCSI I/O request from the memory, and write or read data corresponding to the copy of the SCSI I/O request to or from a storage system.**

Applicant respectfully submits that *Davis* and *Alaiwan* do not disclose, teach, or suggest the emphasized claim features. For instance, Applicant respectfully submits that neither *Davis* nor

Alaiwan discloses, teaches, or suggests a “communication port configured to receive...SCSI I/O requests over a TCP/IP network.” Referring to the Examiner’s comment (see Examiner Interview section) regarding *Davis* teaching SCSI and TCP/IP in col. 3, Applicant respectfully notes that *Davis* discloses SCSI communication between the SCMs 108,110 and the storage pool 112 over a fiber channel network, not over a “TCP/IP network” (see col. 3, lines 11-15, reproduced above). Also, *Davis* discloses that a host may communicate with clients through TCP/IP mechanisms (Column 3, lines 48-55), but such communication does not involve SCSI commands, which occur in *Davis* over a fiber channel network to the storage device as described above. Thus, Applicant respectfully submits that *Davis* does not disclose, teach, or suggest the emphasized claim features.

Additionally, with regard to the “committed” features recited in independent claim 34, Applicant respectfully submits that *Alaiwan* does not disclose, teach, or suggest the emphasized claim features. The Office Action cites Column 10, lines 10-20 of *Alaiwan*, but this section from *Alaiwan* does not disclose, teach, or suggest the claim language involving the determination of a committed SCSI I/O request. It appears that this cited section describes messaging between processor pairs (see Figure 7, and column 9, lines 52-53). According to the above-cited section, a message out will be re-issued by the back-up processor in the case of an aborted comprising stage. Assuming the “message out” can be equated to writing or reading “the SCSI I/O request,” there is nothing in *Alaiwan* that discloses, teaches, or suggests that the processor acknowledges to a host that the SCSI I/O request has been committed, which would be implicit in a committed SCSI I/O request.

Further, lines 20-22 of section 10 in *Alaiwan* bolster the distinctions between the independent claim 20 features and *Alaiwan*. Assuming for the sake of argument that messaging equates to I/O requests, if indeed *Alaiwan* made a determination that an SCSI I/O request was committed, there would be no need to have the I/O request re-issued because by committing it is

guaranteed that the I/O request will be completed. Thus, it appears that *Alaiwan* is not committing an I/O request as that term is understood in the industry. Since *Davis* does not remedy this deficiency, as indicated on page 3 of the Office Action, and since neither reference discloses, teaches, or suggests SCSI communication over TCP/IP, Applicant submits that independent claim 35 is allowable over the combination of *Davis* and *Alaiwan*, and respectfully requests that the rejection to independent claim 35 be withdrawn.

Because independent claim 35 is allowable over *Davis* and *Alaiwan*, dependent claims 38-44 are allowable as a matter of law.

Independent Claim 45

Independent claim 45 has been cancelled without prejudice, waiver, or disclaimer, and thus the rejection to the same has been rendered moot.

In summary, it is Applicant's position that a *prima facie* for obviousness has not been made against Applicant's claims. Therefore, it is respectfully submitted that each of these claims is patentable over *Davis* and *Alaiwan* and that the rejection of these claims should be withdrawn.

IV. Cancelled Claims

As identified above, claims 21, 22, 30, 31, 36, 37, and 45 have been cancelled from the application through this response without prejudice, waiver, or disclaimer. Applicant reserves the right to present these cancelled claims, or variants thereof, in continuing applications to be filed subsequently.

V. Newly Added Claims

As identified above, claims have been added into the application through this response. Applicant respectfully submits that these new claims describe an invention novel

and unobvious in view of the prior art of record and, therefor, respectfully requests that these claims be held to be allowable.

CONCLUSION

For at least the reasons set forth above, Applicant respectfully submits that all rejections and objections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 20, 23-29, 32-35, 38-44, and 46-48 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,



David Rodack
Reg. No. 47,034